Fermilab

Title: ROOT Status and Future Developments

In this talk we will review the major additions and improvements made to the ROOT system in the last 18 months and present our plans for future developments. The additions and improvements range from modifications to the I/O sub-system to allow users to save and restore objects of classes that have not been instrumented by special ROOT macros, to the addition of a geometry package designed for building, browsing, tracking and visualizing detector geometries. Other improvements include enhancements to the quick analysis sub-system (TTree::Draw()), the addition of classes that allow inter-file object references (TRef, TRefArray), better support for templated and STL classes, amelioration of the Automatic Script Compiler and the incorporation of new fitting and mathematical tools.

Efforts have also been made to increase the modularity of the ROOT system with the introduction of more abstract interfaces and the development of a plug-in manager. In the near future, we intend to continue the development of PROOF and it's interfacing with GRID environments. We plan on providing an interface between Geant3, Geant4 and Fluka and the new geometry package. The ROOT GUI classes will finally be available on Windows and we plan to release a GUI inspector and builder.

In the last year, ROOT has drawn the endorsement of additional experiments and institutions. It is now officially supported by CERN and used as key I/O component by the LCG project

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